

S.N.: 10/665,812
Art Unit: 2616

AMENDMENTS TO THE DRAWINGS:

The attached six sheets of formal drawings are filed to replace the originally filed four sheets of informal drawings.

Attachment: Replacement Sheets 6

Annotated Sheets Showing Changes 0 (not applicable)

REMARKS

Claims 1-4, 6-10, 12-26, 18-24, 26-28, 31-37, 39-41 and 43 are rejected under 35 USC 102(e) as being anticipated by Basilier (US 2003/0073453), claims 5, 11, 17, 25, 29, 30, 38, 42 and 44 are rejected under 35 USC 103(a) as being unpatentable over Basilier in view of the commonly assigned Paila et al. (US 2003/0100325), and claims 30 and 44 are rejected under 35 USC 103(a) as being unpatentable over Basilier in view of Watanuki (US 6,853,639). The rejections are respectfully disagreed with, and are traversed below.

The Examiner in rejecting claim 1 refers to Figure 1 and paragraph [0024] of Basilier.

Claim 1 recites in part:

"at least one multicast agent for coupling a multicast message transmission from a first network to a second network, said at least one multicast agent modifying the multicast message transmission from a multicast protocol of the first network to a multicast protocol of the second network".

Paragraph [0024] of Basilier states the following:

The RP network (IP) 135 has in this example a 2-2 configuration and as such, any BS/PCF can connect to any PDSN. In other words, a BS/PCF having multiple MSs coupled to it may have some MSs coupled to PDSN1 and some MSs coupled to PDSN2. Further, a MS can change its serving BS/PCF without changing PDSNs. For example, MS1 140 may first be coupled to PDSN1 125 through the BS/PCF1 145 while traveling in the BS/PCF1 145 cell then be coupled to PDSN1 125 through the BS/PCF2 150 by moving into the BS/PCF2 150 cell. The MSs request to join a multicast group and to receive multicast data transmission may be set up and managed by using control signaling such as IETF protocols IGMP (Ipv4) and/or MLD (Ipv6) along with MCFTP. Although, the MCFTP may include various modifications. Further, the IS-2000 air interface between the BS/PCFs and MSs may be modified to include a radio broadcast capability to efficiently utilize the radio channels available to the BS/PCFs. By introducing a broadcast feature to the MCFTP, more than one MS may listen to the same IP multicast using one transceiver of a respective BS/PCF. The RP network 135 interface may also require some modification as well. For example,

the multicast flow may be associated with a broadcast channel rather than a dedicated channel.

Note is made in Figure 1 of Basilier of the presence of the IP network 120 and the RP Network 135, which is also said to be an IP network. Reference is also made to paragraphs [0022] and [0023] of Basilier, where the following is clearly stated:

"Referring now to FIG. 1, an exemplary communication system including IP multicast services according to the present invention is provided. As illustrated, the communication system may include one or more content servers (CSs), CS1 110 and CS2 115, coupled to an IP network 120. Each of the content servers may have an assigned address, for example 135.23.34.56 for CS1 110 and 28.25.33.79 for CS2 115. The IP network 120 may be coupled to one or more packet data serving nodes (PDSNs), for example PDSN1 125 and PSDN2 130. The PSDNs may be, for example, routers. The multicast packets may be routed from the CSs to the PDSNs through routers in the IP network 120 supported by, for example, IP multicast routing protocols. **These IP multicast routing protocols used between the CSs and PDSN are in one embodiment preferably standard IP multicast routing protocols such as MOSPF, without any other interface.** As indicated, the content servers may provide respective communication multicasts that are transmitted to the **same IP multicast address, e.g., 224.1.2.5. PDSN1 125 and PDSN2 130 may be coupled to a radio-to-packet network 135 (RP network (IP)) that may include IP. The RP network (IP) 135 may be couple to one or more base stations that include packet control functions (PCFs), for example, BS/PCF1 145 and BS/PCF2 150.** One or more mobile stations (MSs), e.g., MS1 140 and MS2 155, may be coupled to the BS/PCFs using, for example, interim standard 2000 (IS-2000). As indicated in FIG. 1, **the PDSN to MS communications may use, for example, protocols IGMP (IPv4) and/or MLD (IPv6) for control signaling of the IP multicasting.** These protocols may be augmented by MCFTP. Although the system of FIG. 1 illustrates only two CSs, two PDSNs, two BS/PCFs, and two MSs, the system may be scaled to have any number of these devices. In fact, from a practical perspective, it is likely that the system would have many more MSs coupled to it at any given instant in time.

In operation, the system uses end-to-end IP multicast. IP multicast packets are directly routed to the PDSNs, PDSN1 and PDSN2, and IP multicast mechanisms are used with the PDSNs being the first hop router seen by the mobile stations, MS1 and MS2. The MS requests receipt of an IP multicast and the system establishes the routing to send the correct IP multicast datagrams to the MS. In the example provided in FIG. 1 both content servers, CS1 110 and CS2 115, "send" multicast packets to the same IP multicast address (224.1.2.5). As such, there are two different IP multicast flows active in the

network which may be designated by the MSs for receipt, multicast flow 135.23.34.56, 224.1.2.5 from CS1 and multicast flow 28.25.33.79, 224.1.2.5 from CS2. By having more content servers in the network, there would be more multicast flows that are possible through a given multicast address. Although a MS may typically request a single multicast flow at a time, a MS could request simultaneous reception of more than one multicasts or all multicasts sent to a particular multicast address by, for example, simply requesting receipt of the multicast address (e.g., 224.1.2.5). Any valid Ipv4 or Ipv6 multicast addresses may be used by the CSs. The multicast addresses do not have to be previously known by the MS, but they can be. **For example, the multicast address may be stored in the MS memory or IP application (e.g., web browser).** In one variation, the multicast address may be sent in real time with, for example, an announcement using protocols such as session internet protocol (SIP), real time transport protocol (RTSP), etc." (emphasis added)

Clearly, Basilier describe a system that uses IP protocols from one end (content server) to the other (MS). As such, Basilier clearly do not disclose or suggest, as in claim 1, "at least one multicast agent **modifying the multicast message transmission from a multicast protocol of the first network to a multicast protocol of the second network**", at least for the reason that the system of Basilier is explicitly stated to use "end-to-end IP multicast".

The Applicant notes as well that Basilier clearly describes an end-to-end IP system that controls the transmission from one end of an IP network to the other end (the MS). This is possible only through messaging at different network interfaces, which requires mapping or conversion at different levels (e.g., IP layer to lower layers of the Radio network). However, in all cases the end-to-end network remains an IP network. Further, Basilier is not seen to disclose the use of WLAN (IEEE 802.11), Bluetooth, etc.

The Examiner is respectfully reminded that for a rejection to be made on the basis of anticipation, it is well recognized that "to constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art", Ex Parte Gould, BPAI, 6 USPQ 2d, 1680, 1682 (1987), citing with approval In re Marshall, 578 F.2d 301, 304, 198 USPQ 344, 346 (CCPA 1978).

In that all elements of claim 1 are not found in Basilier, Basilier cannot be said to anticipate claim

1.

The same arguments apply as well to at least some of the dependent claims, e.g., claims 2-4, which specifically refer to one network being an IP network and another network being a non-IP network.

The arguments made above are applicable as well to independent claims 7, 13, 19 and 32, each of which refers in part to a modification of the protocol of a multicast transmission, in contradistinction to the end-to-end IP network disclosed by Basilier.

In that the independent claims are all clearly patentable over the disclosure of Basilier for at least the reasons stated above, then all claims that depend therefrom are also clearly patentable, whether considered only in light of Basilier, or in view of either of Paila et al. or Watanuki et al.

The Applicant notes further in this regard that the Watanuki publication describes a multicast system where it is necessary to convert from 'one level' to another level. For example, converting from Layer 2 to Layer 3 (Figure 14). This also clearly differs from the case of converting a multicast message of one network to another network at the same level, e.g., application level in the OSI layering. To give a non-limiting example, the use of the exemplary embodiments of this invention enables the conversion of a SyncML-based multicast message coming from an IP network for transmission over OBEX in a Bluetooth network (both are at the same level).

The Examiner is respectfully requested to reconsider and remove the rejections of the claims 1-44, and to allow these claims as filed.

Claims 45-48 are newly added, and are also deemed to be allowable for at least the reasons discussed above.

An early notification of the allowability of claims 1-48 is earnestly solicited.

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8/13/2007
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